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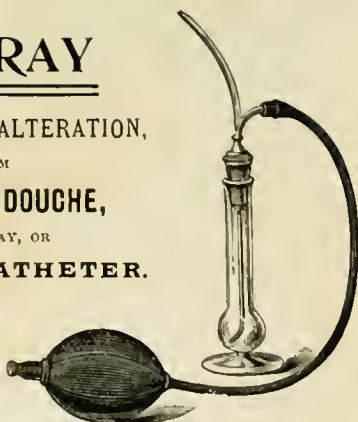
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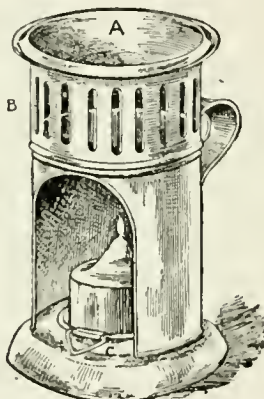
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BRITISH SANATORIA

FOR THE

OPEN-AIR TREATMENT OF TUBERCULOSIS

With numerous illustrations.

[Reprinted with Additions and Alterations from the
"West London Medical Journal."]



London :
JOHN BALE, SONS & DANIELSSON, LTD.
OXFORD HOUSE,
83-89, GREAT TITCHFIELD STREET, OXFORD STREET, W.

PREFACE.

IT is hoped that this reprint—to which additions have been made—from the October issue of the *West London Medical Journal* will prove useful to the profession generally. It supplies information upon a subject which hitherto has been difficult to obtain, and shows the progress which has been made in this country of the open-air treatment of tuberculosis. No pains have been spared to make the list of Sanatoria (here arranged in alphabetical order) complete, and every endeavour has been made to render it attractive by the use of illustrations. As further issues of this publication will of necessity be required in order to ensure an up-to-date completeness and accuracy upon all matters relating to the British Sanatoria, the publishers will be glad to receive the necessary details respecting any new institutions of the kind which may hereafter be promoted.

PERCY DUNN,

Editor of the "West London Medical Journal."

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BRITISH SANATORIA

FOR THE

Open-Air Treatment of Tuberculosis.

BRINKLEA SANATORIUM, BOURNEMOUTH.

(Dr. KINSEY-MORGAN.)

BOURNEMOUTH has ever been in the foremost rank as a health resort for chest diseases, especially phthisis. So many have been the cases of absolute recovery from incipient phthisis, or a quieting down of those in which the disease has been more advanced, that it has more than proved its claim to be England's Sanatorium *par excellence* for chest cases generally.

The principles of treatment, as first taught by Brehmer at Göbersdorf, and carried out so successfully under Dr. Walther at Nordrach, have come to be recognised as the best. They consist of careful feeding, graduated exercises, rest in shelters or large well-ventilated rooms with open windows, and constant supervision; and they are rendered more effective when the patients are removed from their habitual climates, home surroundings, and home worries.

Well nigh every detail of the patient's life is regulated by the physician, and he is induced by judicious management to eat very much more than he is accustomed to.

There are three regular meals a day, and in addition milk with biscuits or fruit is given at stated intervals. Patients thus treated soon lose their cachectic look and put on an aspect of robustness, they breathe better, and the rapidity with which they put on flesh is often phenomenal.

In this state, with every muscle stronger and every organ functionally healthier, they are within a brief period able to return to their usual avocations, not as chronic invalids, but either actually cured or in such a state that they are no longer so ill as to require regular attendance, but maintain their weight, and eventually live down their invalidism.

Phthisical patients in hotels and boarding houses, and even in some private houses, are at many disadvantages as regards treatment, surroundings, proper medical control, and supervision. Much of the day is spent in sunless, ill-ventilated, over-crowded rooms, with little or no thought of hygienic principles; thus it is well arranged sanatoria are imperative.

Brinklea, by its unique position, standing in its own grounds, overlooking and in close proximity to the pine woods, is admirably adapted for the *cure à l'air*. We have here on our southern coast a locality possessing a dry soil, good sanitary arrangements, and an equable climate, which compares favourably with foreign health resorts.

The house is well planned, having lofty and large airy bedrooms, accommodating about ten patients. It is well sheltered from N. and E., has a sunny aspect, good ventilation, and all the walls are distempered with Hall's washable colours.

The general supervision and medical control are conducted by Dr. Kinsey-Morgan, whose knowledge and long experience of the open-air treatment of tuberculosis is in itself a guarantee, but patients are in no way precluded from selecting their own physician.

The terms are inclusive, from $3\frac{1}{2}$ to 7 guineas per week, and vary according to the bedroom occupied, the only extras being personal laundry and alcoholic drinks.

For further particulars application should be made to 1, Stanhope Gardens, Bournemouth.

COTSWOLD SANATORIUM.

(DR. PRUEN AND MR. C. BRAINE HARTNELL.)

This Sanatorium, which takes in all forms of tuberculosis and not that of the lungs only, is situated on the Cotswold Hills, near Cheltenham, at an elevation of 800 feet. It has a southerly aspect, overlooking the Stroud Valley. From behind the grounds a view of the whole Severn Valley is obtained, stretching from the Shropshire Hills in the north to the Bristol Channel in the south-west. The entire range of the Malvern Hills is seen in the north-west, with the Welsh Hills beyond them. The soil is Oolitic Limestone, from 150 to 300 feet thick.

The Sanatorium stands in its own private grounds, nearly 70 acres in extent, well wooded with fir and beech. The grounds stand in the centre of a tract of common land about 1,000 acres in extent, and similarly wooded. Protection



VALLEY OF THE SEVERN—VIEW BEHIND THE COTSWOLD SANATORIUM.

against cold winds is afforded by the trees, as well as by the rise of the ground—50 feet in height—behind the Sanatorium to the north and east.

A sanitary farm of 350 acres has just been started in connection with the Sanatorium for the purpose of supplying it with milk, cream and butter from cows which have been tested for tuberculosis and found free from that disease.

The buildings consist of residential blocks for patients, an administrative block, servants' block, and engine-house block. Most of the buildings are on one floor, each residential block being of stone or of wood on a stone foundation, with five or six bed rooms for patients. In front of each block is a glass-covered verandah, 10ft. wide, and to the sides and back a narrower one of the same kind. The ends of these verandahs are protected by screens of wood and glass. There are also shelters of different kinds in the grounds.

The heating is by hot-water pipes, which pass through the stone foundations under the floor and are connected with radiators in each room and corridor. The verandahs are warmed in the same way. Every room has sanitary walls, floor, and ceilings, and is supplied with hot and cold water for washing. There are comfortable bath rooms, with hot and cold-water baths, shower baths, and needle bath.

The lighting is by electricity throughout, the current being obtained from a dynamo worked by an oil engine in a house near the Sanatorium. This current also works an electro motor which pumps up the water supply from two springs in the private grounds, 160 feet below the Sanatorium.

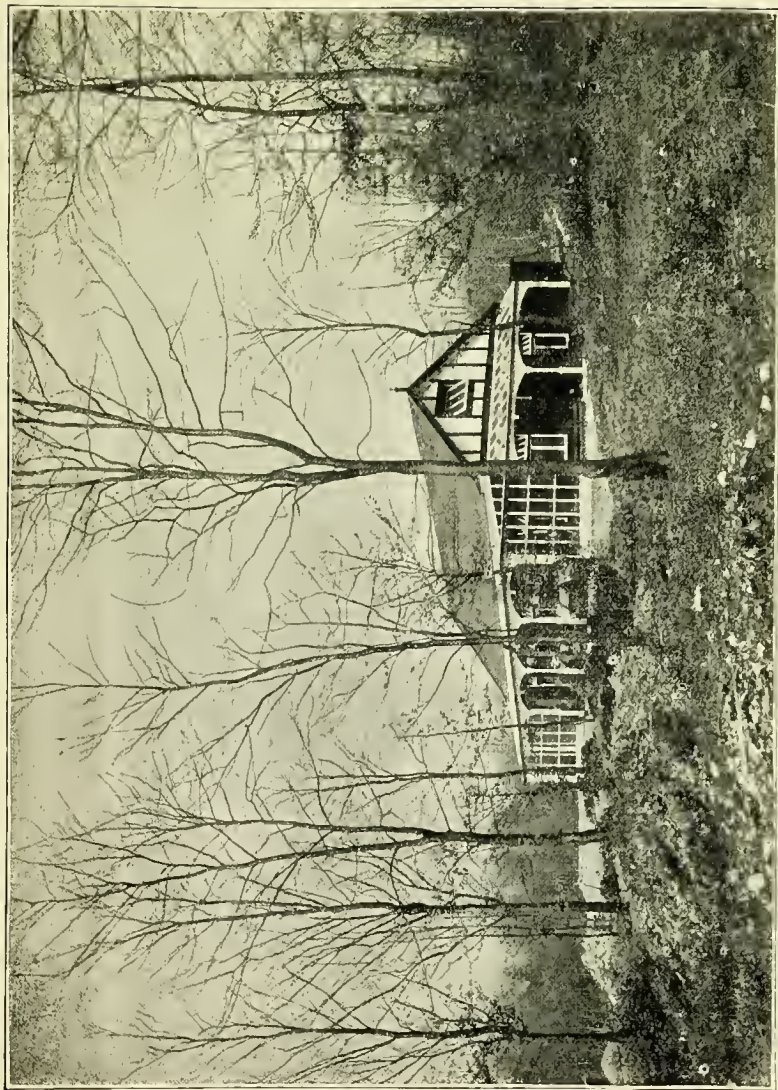
The treatment is on the now well-known lines, first practised in England by Mr. Bodington, of Sutton Coldfield, near Birmingham, in 1836; then carried out into a well-thought-out system by Brehmer in Germany, in 1859; and during the last ten years worked out in great detail by Dr. Otto Walther, at Nordrach, in the Black Forest. Patients live all day in the open air, take the amount of carefully graduated exercise which is daily prescribed for them, and have a diet of nourishing food selected to suit the disease, and adapted to English tastes.

One of the principals and also the house physician resides in the building.

Attendants and friends are only exceptionally permitted to live at the Sanatorium.

At present there are thirty beds, but these are being added to.

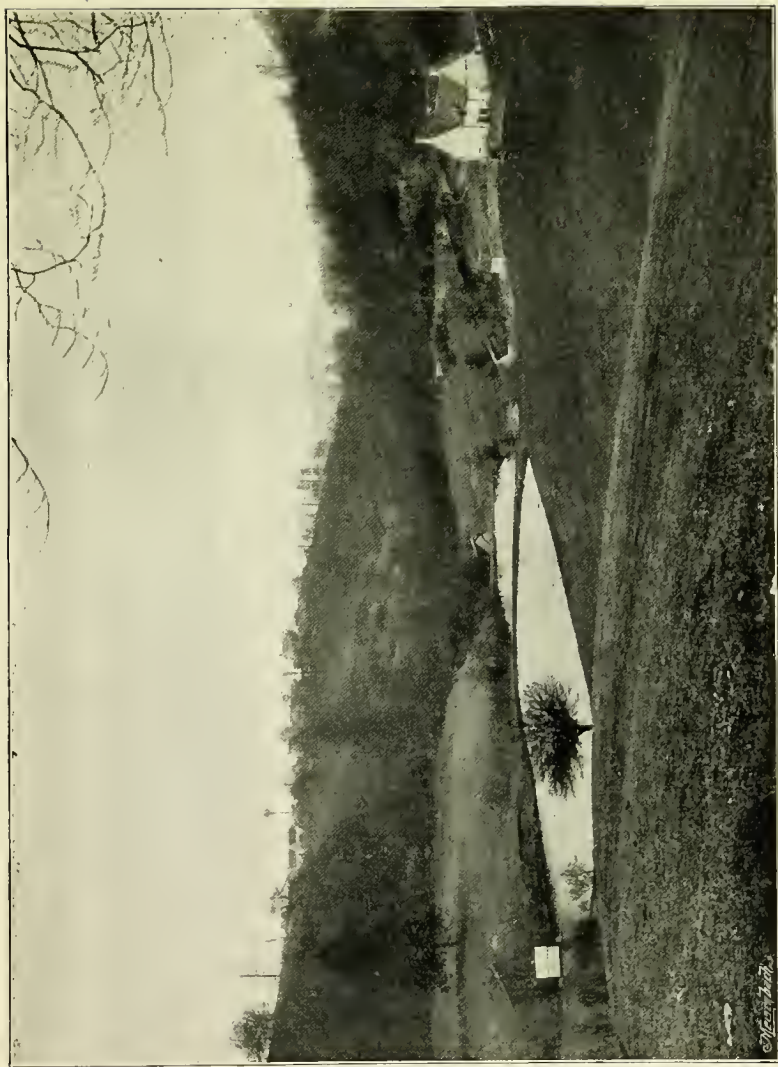
The charges are five guineas weekly. These are inclusive of medical attendance, board and lodging, the only extras being personal washing, alcoholic beverages, and a special



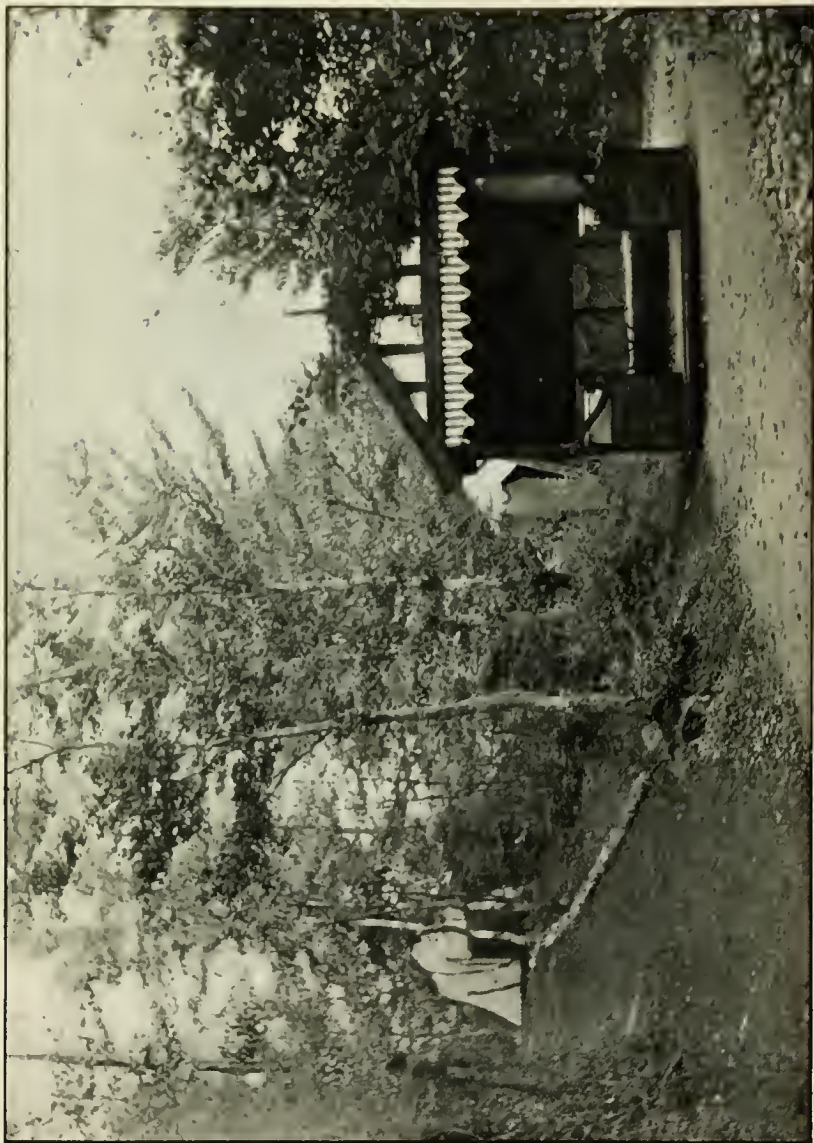
EAST WING OF MAIN BLOCK, COTSWOLD SANATORIUM.



COTSWOLD SANATORIUM—ONE OF THE SMALL VERANDAHS.



SMALL RESERVOIRS, WITH PUMPING STATION BELOW, IN THE GROUNDS OF THE COTSWOLD SANATORIUM.



A REVOLVING SHELTER IN THE GROUNDS OF THE COTSWOLD SANATORIUM.

nurse, should one be required. Accounts are delivered weekly.

The Sanatorium is seven miles by road from Cheltenham, Gloucester, and Stroud. Letters and parcel post packages to patients should be addressed: Cotswold Sanatorium, Cranham, near Stroud. Telegrams: Cotswold Sanatorium, Birdlip, near Gloucester. Parcels by train: Cotswold Sanatorium, care of The Birdlip Carrier, The Crown Inn, Cheltenham. A carriage meets trains by appointment to take patients from Stroud, Gloucester, or Cheltenham, to the Sanatorium. All information may be obtained from either of the two physicians or from the Secretary.

Physicians: S. T. Pruen, M.D.; C. Braine Hartnell, L.R.C.P., M.R.C.S. House Physician: G. Crace-Calvert, M.B. Secretary: T. E. Rickerby, 2, Ormond Place, Cheltenham.

CROOKSBURY SANATORIUM.

(DR. F. RUFENACHT WALTERS.)

This institution is being built in the lovely tract of country which lies to the south of the Hog's Back, near Farnham, in Surrey. Within easy distance by rail from London, it is situated in open country of an eminently suitable kind, and has sufficient hilly ground attached to it (32 acres) to permit of walks of the most varied character—level and sloping, over grass and heather, or under the pine trees which cover much of the surface.

Among the most important requisites for successful treatment of consumptives are pure air, a dry soil, a southerly aspect with a good fall, shelter against cold winds, and a moderately bracing climate. All these are possessed by the Sanatorium at Crooksbury Ridges. The soil—Folkestone beds of the lower greensand—is mainly sandy for several hundred feet below the surface; pine-clad hills lie to the north, east, south-west and west, protecting a shallow valley trending south. At the head and other side of this valley are well-wooded ridges, from which beautiful and extensive views may be obtained northwards, towards the Hog's Back and the hills near Aldershot, and southwards over the broadest part of the greensand outcrop, from the Charterhouse at Godalming to the Devil's Punch Bowl and the Hampshire Hills. The rainfall of this district is very moderate; and so dry is the soil that water poured on to its surface immediately sinks

out of sight. But although dry, the soil is not dusty, comparing very favourably in this respect with the chalk downs and the sandy tertiaries round London. An investigation into different sandy soils will reveal considerable differences in the proportion of calcareous particles, which increase the fertility but also the dustiness of the land. Altitude above the sea level is useful in several distinct ways in the treatment of consumptives; notably, by the effect of rarefied air on chest expansion, and by the tonic effect on digestion, blood-formation and general nutrition. While no part of England can rival the Alps in the first of these respects, the 420 feet altitude of Crooksbury Ridges is sufficient not only to dry the soil and improve the prospect, but also to give a very obvious tonic quality to the place. Nowhere in England do we find a really dry atmosphere; but extensive sandy regions, such as those which extend for miles round the Crooksbury Sanatorium, have a notable influence in diminishing atmospheric humidity. Possessing hill-slopes in every direction, the Crooksbury Sanatorium will have sheltered walks no matter what wind may blow. In very hot, still, summer weather, a northerly or an easterly slope may be of great value.

Coming next to the building: this has been planned in the simplest possible way consistent with comfort and with its intended purpose. Twelve bedrooms on one floor, all looking south, are served by a common corridor, behind the centre of which is a large dining saloon attached to the kitchen block. The situation being sheltered, there has been no need for protecting wings. The medical officer is separately accommodated in another part of the grounds. Wooden buildings not being permitted by the local authority, the Sanatorium is being substantially built in brick covered with white rough-cast, with a red-tiled roof. The centre of the latter is utilised for nurses' quarters, the rest as a boxroom. Excepting the kitchen block and the central gable, the Sanatorium is on one floor. Lavatories, bathrooms and earth closets project at each end to the north of the corridor. Water will be laid on in the lavatories and kitchen block, but not in the patients' bedrooms. Slop-water will be dealt with by immediate filtration and aëration, the effluent passing on to the land. Internally, the Sanatorium is being constructed in such a way as to be readily kept free from dust and dirt; the floors of polished boards, tongued and ploughed, the walls of washable material, all angles rounded, no projections to catch the dust. The windows have extra large casements, opening outwards and reaching to the level of the terrace; a fanlight over each. In addition to ventilation by wide-open windows, provision has

been made for a large ventilating shaft above the doorway to an opening under the eaves, so that in case of need the door may be shut without interrupting the constant stream of fresh air from end to end of the room. Heating will be by hot-water pipes ; lighting at first by lamps and candles, until the electric installation has been completed.

The Crooksbury Sanatorium being intended for middle and upper-class patients, who cannot properly be provided for by charity, and it being undesirable that such institutions should be owned by the medical officer, a small company was formed to raise the necessary funds. To ensure due attention to the medical details, the resident medical officer (Dr. F. Rufenacht Walters) has a seat on the Board ; but the finances are entirely in the hands of the directors. The object of the company is primarily philanthropic ; but in order to ensure stability and progress, it has been placed upon a purely business footing, although it is intended to devote the profits of the undertaking to the improvement of the Sanatorium after payment of a reasonable dividend to shareholders. The fees will be five guineas per week, with very few extras. Plans had been made for a larger building with protecting diverging wings ; and one of the best sites for such future extension has been reserved higher up the hill. It need scarcely be said that a proper staff of nurses and servants will be provided, as well as a second medical officer, as soon as may be necessary. The first block will, it is expected, be ready for patients early in January, 1900.

The treatment will be based for the most part on the methods adopted at Nordrach. Personal supervision by the resident medical officer ; abundant digestible food, prepared by a competent cook ; rest in the fresh air during febrile stages ; graduated hill climbing and other exercises when the fever is past ; douching and other hydropathic measures wherever they appear to be indicated ; medicinal remedies according to need. Sputa will be received into suitable receptacles, and burnt after the addition of sawdust or other absorbent. Linen will be disinfected by boiling and steaming, rooms cleansed with damp cloths, floors beeswaxed and turpented. A special method, based upon natural agencies, will be adopted to purify the excreta. Possessing exceptional advantages in its situation and the character of its grounds, the Crooksbury Sanatorium will, it is hoped, prove to be a valuable addition to the British sanatoria already in existence.

“THE FIRS,” MUNDESLEY, NORFOLK.

(MISS DOWNE.)

This is a detached house surrounded by a small garden, and was opened in June last for the reception of six patients. There are three revolving shelters in the garden, and a conservatory on the south side of the house which can be opened along the whole of its southern side.

There is a resident nurse, and the patients are seen three times a week by Mr. W. J. Fanning, and Dr. Burton-Fanning visits as often as may be necessary.

“The Firs” is about ten minutes’ walk from Mundesley station, and carriages can be ordered to meet patients if notice be given beforehand.

The charges are $2\frac{1}{2}$ to $3\frac{1}{2}$ guineas per week, including everything except personal laundry, alcohol and extra nursing if required.

Applications for admission can be made to Miss Downe, The Firs, Mundesley, Norfolk.

LINFORD, NEAR RINGWOOD, HANTS.

(DR. R. MANDER SMYTH.)

This house, which was the first of its kind in the British Islands specially built for carrying out the Nordrach treatment, is situated in what may be called the hinterland of Bournemouth, sufficiently far away to be out of range of the injurious influences of a great town, while retaining the advantages of the district—gravelly subsoil, a large amount of sunshine, and moderate rainfall.

It is placed on a slope facing S.S.E., within a stone’s throw of woods of pine and oak, which extend for three miles to the N.E. of the Sanatorium, and sheltered on all sides by rising ground—the elevated western moorlands of the New Forest. The only town in the district, viz., Ringwood, is small, and two and a half miles distant, the surrounding country being practically a vast park, with few habitations or main roads.

The situation, therefore, affords the isolation from human life and traffic, the pure atmosphere and sheltered walks, which are the only climatic essentials for the treatment of the disease, and for which neither a desert nor an Alpine height is necessary.

After removal of the patient from the prejudicial home

surroundings in which the illness so often commences, into this suitable environment, the treatment consists of a carefully systematised mode of life, in which an adequate and physiological diet plays a prominent part. To this is added graduated exercise, with the right proportion of rest, both mental and physical, in the open air. By these means it is sought, not only to replace the wasting caused by the disease, but to form new tissues, and so, by building up again the weakened organism and restoring the failing vital energy, to remove the susceptibility of the tissues to the inroads of the bacilli. The general health is brought into the highest possible state of vigour, so that the processes of repair in the lungs are greatly stimulated and the right way of living is formed into a habit, in order to prevent relapses on return to the ordinary conditions of life.

These results are often difficult of attainment, and can, indeed, only be accomplished by an unremitting attention to every detail that bears directly or indirectly on the patient's health, which is generally impossible at home, or in a populous health resort. Dr. Mander Smyth therefore lives in continual personal touch with those under his charge, making a careful study of each varying case, and to these ends visits each one separately three times daily. He has, moreover, himself suffered from advanced consumption, and was treated in Dr. Otto Walther's Sanatorium at Nordrach, in Baden, where he subsequently enjoyed the privilege of assisting Dr. Walther, and obtaining an experience of the best mode of treatment; moreover, it is with the advice and approval of his great German colleague that he is prepared to carry out in its integrity Dr. Walther's system, which is by far the best form of what is popularly termed the "open-air treatment."

The Sanatorium buildings have been carefully designed to avoid formation of dust or smoke, to cause patients while indoors to be practically in the open air, and to spare exertion to those in bed. Each of the patient's rooms has a hot and cold water supply laid on to the washstand and to a douche bath. The heating is from a common centre. All bedrooms are fitted with casement windows. The lighting is electrical, the Sanatorium having its own installation. Arrangements are made for the special feeding of cows for the butter and milk supply of the Sanatorium.

The terms for board, lodging, medical attendance and medicine are £5 5s. per week, inclusive of everything except personal washing, alcoholic drinks (which can only be taken by advice), and special nursing (if necessary).

Patients' friends are only permitted to stay in exceptional circumstances, and by special arrangement.

Accounts are presented for payment weekly.

Applications for vacancies must be made in the first instance by letter to Dr. R. Mander Smyth, Linford, Ringwood, Hants. Carriages can be obtained on application, to convey patients from Ringwood Station (L.S.W.R.)

Telegrams: "Dr. Smyth, Ringwood."

MAITLAND HOUSE, KIDMORE, NEAR READING.

(DR. ESTHER COLEBROOK.)

Maitland House has been opened as a temporary sanatorium pending building operations, and has accommodation for six patients.

Cases suitable for admission are those suffering from the various forms of tuberculous disease in early stages. The treatment consists chiefly in:

(a) A continual environment of pure fresh air day and night.

(b) A full and appropriate dietary.

(c) Careful regulation of the whole daily life under medical supervision.

The sanatorium is under the medical supervision of Dr. Esther Colebrook. The treatment is carried out on the approved system adopted at most of the well known institutions of Germany and Switzerland, while the suitability of this particular locality for open-air treatment is proved by a successful record of cases extending over fifteen months.

The Nordrach system of feeding and supervision is adopted. In addition to a very full dietary, patients usually take three pints of milk a day and $\frac{1}{4}$ lb. of Devonshire cream. The cows are specially fed, and are under strict supervision.

The house is situated in a bracing district of the Chiltern Hills. The neighbourhood is one of beech woods and open commons, and the porous nature of the soil (gravel overlying chalk) ensures rapid dryness after rain and perfect freedom from fogs. A revolving "liegehalle" allows patients to take advantage of sun or to shelter from the wind while reclining in the open air. Blanket bags are provided to protect from cold.

Monthly reports are issued to the friends of patients, but any unfavourable development is immediately notified. Visits to patients can only be allowed by permission of the doctor.

Consultant: Hastings Gilford, Esq., F.R.C.S., Reading.

Present terms:—Two to three guineas a week. Accounts

weekly. Extra :—Stimulants (if ordered), special nursing, washing, carriages. Railway Station, Reading (G.W.R. ; L.S.W.R. ; S.E.R.), $5\frac{1}{2}$ miles. Cab fare 6s. Patients can be met by a pony carriage, Fare, 3s.

Applications for admission should be addressed to Dr. Esther Colebrook, Maitland House, Kidmore, Reading.

MOUNT PLEASANT SANATORIUM, VENTNOR.

(DR. C. MUTHU.)

This Sanatorium has lately been opened for the open-air treatment of phthisis. Ventnor has long been noted as a health resort for chest affections. It satisfies all the conditions necessary for a sanatorium: (1) Its climate is equable, very bright and dry; relatively mild in winter and cool in summer, and yet bracing. (2) Its soil is absorbent, dry, warm, and well drained by a main sewer with outfall into the sea. (3) It has a full exposure of sun and sea, the sea breezes blowing right from the Atlantic, purifying the air and increasing its bracing effect. (4) It is protected from the cold north and north-easterly winds by St. Boniface Down and high hills. (5) It enjoys a larger amount of sunshine than any other place in England, as the following table (taken from the *Meteorological Journal* for the years 1881-1889) will show :

					Mean.
Ventnor	...	...	...	...	1644'5
Bournemouth	...	...	...	...	1477'1
Eastbourne	...	...	...	...	1620'1
Llandudno	...	...	...	...	1219'0

(6) It has a comparatively low relative humidity. (7) Its water is pure and supplied from springs in St. Boniface Down in the north.

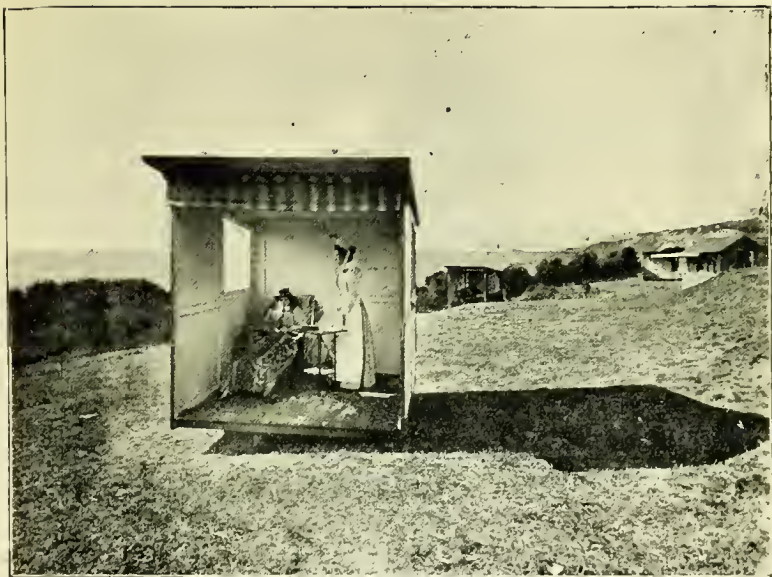
The Sanatorium, which stands on the undercliff facing south and south-west, is pleasantly situated in its own grounds of about two acres, about 120 feet above the sea level, commanding extensive and uninterrupted views of the sea and the cliffs. The house is substantially built, and every room is fully exposed to the sun and sea. It is plainly furnished without any carpets, heavy curtains or any ornamentation. The chairs, lounges, &c., are of bent wood and cane, in order that everything may be washable. All woollen material, as saddle bag, or stuffed chairs or sofas are scrupulously avoided in the Sanatorium to minimise the risk of infection. The bedroom furniture is mostly satin walnut, and is all raised



MOUNT PLEASANT SANATORIUM, FACING LAWN AND SEA.



A SHELTER USED IN THE GROUNDS AT THE SANATORIUM.



SHELTER, SHEWING SEA VIEW.



ANOTHER VIEW OF SHELTER.

from the ground by wooden blocks for free admission of air and thorough cleansing. Each patient occupies a separate bedroom facing south or south-west.

The grounds are composed of two terraces—the upper terrace, which has a wide expanse of sea view, is used for open-air exercise by patients. The lower one, which slopes down from the upper, is utilised for revolving shelters which are erected in different parts of the grounds. Both the terraces overlook the sea, so that the patients breathe all day long the pure ozonified air, which blows right from the Atlantic, just as much as they would if they were out at sea. The building and the shelters are lighted with electric light.

The principles of treatment are the same as at Nordrach: windows kept wide open day and night except when the occupants of the rooms are dressing and undressing; patients remain out of doors all day, some sleeping in the shelters all night. The sputa are received into Detweiller's flasks and spittoons containing disinfectant; the walls are painted with *duresco*, a washable material. The floors are covered with linoleum and mopped daily with a damp cloth containing a weak solution of carbolic. Three meals a day are provided; most of the patients take their meals in the common dining room under the supervision of the resident physician. Besides the meals the patients take about three pints of sterilised milk daily, and no alcoholic beverages are allowed, the Sanatorium being conducted on temperance principles. The medical treatment is carried on by the medical director, the resident physician, a matron and a trained nurse. There is accommodation for from eight to ten patients. Inclusive terms are 3 to 3½ guineas weekly, payable in advance. Mode of transit: trains run right through to Ventnor from Waterloo by L. & S.W. Railway, or from London Bridge by L.B. & S.C. Railway. All communications should be made to the Resident Physician, Mount Pleasant Sanatorium, Ventnor.

MUNDESLEY SANATORIUM, NORFOLK.

(DR. BURTON-FANNING AND MR. W. J. FANNING.)

The Sanatorium at Mundesley, which it is expected will be ready for the reception of patients by the middle of October, 1899, has been specially designed and constructed for the purpose of carrying out the open-air treatment of phthisis.

Mundesley has a post and telegraph office, and is a terminus of the Great Eastern, and Midland and Great

Northern Railways, so that it is easily accessible from London, the Midlands, and the North. The Sanatorium is one mile distant from the railway station, and about the same distance in a direct line from the sea. It is removed from any high road.

The building is situated on the southern slope of a hill, which protects it from the prevailing winds blowing from the north, north-east and north-west, while to the south there is an expanse of slightly undulating country, giving a view extending for several miles in that direction.

The soil is sandy, the sand being found to go down to a great depth to the underlying chalk some 160 feet below the surface, thus assuring dryness and good drainage.

Twenty-five acres of land have been acquired, which will be suitably laid out later on.

The building itself is of wood, upon brick foundations. It consists of a ground floor, and one floor above, with accommodation for servants in attics. All the rooms for the use of patients face the south, twelve bedrooms being on the upper floor and three on the ground floor. Large dining and drawing rooms are also on the ground floor, and a corridor 8 ft. wide extends the whole length of the building on both floors, giving access to the rooms. There are large casement windows to all the rooms, which can be opened so as to admit a maximum amount of air, and over each bedroom door there is a ventilator. W.C.s are found on both floors, and bath rooms upstairs. Two staircases, one near each end of the building, lead to the upper floor. The floors are covered with linoleum and the inside walls with pegamoid paper, which will allow of cleansing by means of damp cloths, thus obviating the stirring up of dust by sweeping. All corners are rounded, and as far as possible no recesses have been left in which dust can accumulate. Most of the furniture has been specially designed with the same object in view, and is covered with pegamoid leather cloth, which can be daily wiped with a damp duster. A verandah extends along the whole southern part of the building, where patients can lie out on long cane chairs; and shelters, each to hold two to four patients, are provided near the house in which they can recline when the wind blows from the south. The shelters are so constructed that they will either revolve, so as to enable the occupants to get the full benefit of the air without being exposed to the wind, or else they are provided with movable shutters, which can be so arranged as to exclude the wind from whichever quarter it may blow, while one side at least is left wide open. Electric light is used for illumination throughout the building, and also in the verandah and



MUNDESLEY SANATORIUM.

shelters, so that patients may continue to sit out of doors after dark, thus avoiding the necessity of coming indoors until bed-time. Warming in winter will be effected by hot-water apparatus with radiators in each room. In some of the rooms there are also fire-places.

Water is pumped from a deep well extending into the chalk, and is laid on all over the building.

Graduated paths are laid out by which patients can gain the shelter of a small fir wood which crowns part of the hill to the north of the building, and on this hill shelters are also provided from which glimpses of the sea can be obtained.

In selecting the coast of Norfolk for the open-air treatment of consumption, we have been influenced by the knowledge that its air is extremely bracing and clear, that it has a large amount of sunshine and a very small rainfall. Experience has shown that most cases of consumption are suited by such a climate. Though the Sanatorium is nearly a mile from the sea and is efficiently protected from the prevalent sea winds by the hill on which it stands, its climate marks it as less suited for old standing cases and for those characterised by catarrh or feeble circulation, than for those with good powers of reaction. The early part of the winter has been found to produce the most favourable results, but in summer the heat is less oppressive here than in most parts of England. The treatment followed is that known generally as the open-air treatment, with certain modifications suggested by some years' experience of it in this district.

The patients will be under the immediate medical control of Mr. W. J. Fanning, who will reside at the Sanatorium, and Dr. Burton-Fanning will visit at least once a week. There is also a matron, who looks after the patients and superintends the housekeeping.

The weekly charges have been fixed at £5 5s.; this includes medical attendance, but does not include personal laundry, alcohol, or extra nursing if required.

Applications for admission can be made to Mr. W. J. Fanning at the Sanatorium, Mundesley, Norfolk.

Carriages are generally to be obtained at the railway station, or they will be ordered to meet patients upon their arrival if notice be sent beforehand to the Sanatorium.

NORDRACH-UPON-MENDIP.

(DRS. THURNAM AND GWYNN.)

Nordrach-upon-Mendip is an institution opened for that special treatment of consumption and other diseases of the lungs which has become known in England as the "Nordrach" Cure. This treatment, introduced by Brehmer about 40 years ago, has now become associated with the name of Dr. Otto Walther, and so striking are the results obtained in the cure of consumption at the Sanatorium at Nordrach in the Black Forest, that we have opened this institution, where, in England, it is possible to carry out the Nordrach system in all its details.



NORDRACH-UPON-MENDIP SANATORIUM.

The treatment is frequently spoken of as the "open-air" cure, but it is more properly known in Germany as the Sanatorium Treatment; for its application does not only consist in placing a patient in the open air. It is equally important to bring the sufferers from phthisis away from the excitements and atmospheric impurities of town life; and from the unhealthy association with a large number of invalids, and to place them in a house especially designed to

promote their peace of mind and more healthy condition of body. The daily life of the patient is lived under the direction of doctors who live with them in the same building, and, having made the cure of this disease an especial study, are able to guard against those accidents which so often check progress towards health; at the same time the patients are



VIEW IN GROUNDS.

carefully taught in what way to arrange the most minute details of their daily life, so as to ensure the observance of those conditions which are essential for cure, viz., purity of atmosphere at all moments, avoidance of undue exertion, and the assimilation of a suitable quantity of nourishing food.

We have chosen Nordrach-upon-Mendip as a spot that enables us to meet these requirements in the fullest manner. Both the members of the medical staff have themselves

suffered from phthisis, and have been entirely cured at the parent institution in Germany; in addition, one of them has had the privilege of assisting Dr. Walther in the care of his patients, taking sole charge during his absence; and it is with the advice and approval of their German colleague that they are prepared to treat English patients in England in the same manner.

The house lies 862 feet above the sea level, in one of the healthiest portions of the Mendip Hills; it faces south and south-east, and is admirably protected in every necessary direction by woods and coppices of beech and fir trees. It



VIEW IN GROUNDS.

has in the immediate neighbourhood a large number of walks both level and ascending, through its private grounds and over undulating moorland, giving the greatest variety of direction and inclination, in addition to landscape scenery of a very beautiful order. The neighbourhood is remote from any town, and therefore entirely free from any atmospheric impurity, dust or smoke; and as the house stands in grounds of 65 acres, the utmost privacy and quietude is ensured for those patients who are unable to wander beyond them. The patients are visited three times a day in their rooms, and at each visit are directed how to spend the next

few hours—either in resting in hammocks or on sofas in the nearer woods; or if able to do so, in taking walks in the surrounding country. They meet at stated hours for meals, which the greater number of them take in common, and always in the company of the doctors. Milk and other food supplies are obtained from specially chosen sources; and thus every detail of the patient's comfort is constantly under the care of the medical staff.



FOREST WALK.

There is one inclusive charge, *i.e.*, £5 5s. per week, for board, lodging, medical attendance, &c., the only extras being laundry and alcoholic drinks, the latter being only taken under medical advice. Any special nurse, if required, must be provided by the patient.

Nordrach-upon-Mendip is about eight miles from either Wells or Cheddar Stations, and carriages are sent to either of these places, or to Yatton Station, twelve miles away, if ordered beforehand.

The presence of friends or relations of patients is not permitted at any time, except by the special sanction of the physicians.

All applications respecting the system of treatment followed out, or with regard to accommodation, &c., should be made

to one of the medical residents, Dr. Thurnam, or Dr. Gwynn, Nordrach-upon-Mendip, Blagdon, R.S.O., Somerset.

Telegrams: "Nordrach, Blagdon, Bristol."

OVERTON HALL, POOLE ROAD, BOURNEMOUTH.

(DRS. FRANCIS POTT and C. GUTHRIE STEIN.)

This Sanatorium, which claims to be the first of its sort established in England, is specially arranged to receive sixteen patients. The building is in style a large villa, with a frontage of 80 ft., designed for its particular purpose, and providing a series of south rooms for the accommodation of the patients. The main building, which has a due south front, is built of red brick, and consists of a central block, with projecting ends.

Between the projecting ends is situate a spacious lofty verandah communicating with the lower bedrooms, and a balcony above it communicating with the upper bedrooms. The front portion of the verandah is provided with glass screens, so arranged as to offer a maximum of protection to the invalids, at the same time that they are practically living in the open air, and not in an enclosed "hot-house" or "winter-garden."

The garden, facing the house, is devoted to "huts," or "sun-traps," or "revolving shelters," and in all cases secure rest in the open air, with privacy for those who may desire it, on the arrival of friends or visitors.

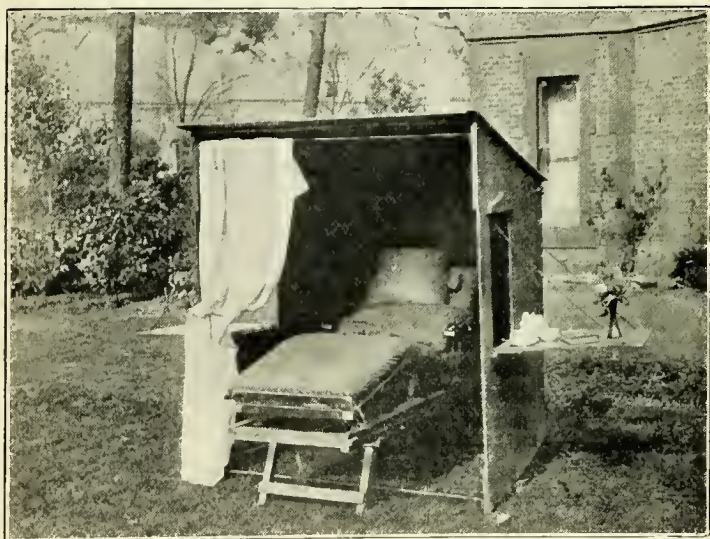
The ground-plan of the back of the house—the north side—corresponds to that of the south side, and consists of a central block with projecting wings. In this part of the house are located the dining room, consulting room, kitchen and offices, downstairs; and the bathrooms and quarters devoted to the matron and staff, and friends of patients, upstairs.

A leading feature of the Sanatorium is the corridor-hall, 70 ft. in length, running the whole length of the house (with arrangements for lighting, heating and ventilation), rendering it most suitable for the use of the patients during the hour between the last meal and bed-time. This hall is provided with comfortable chairs, and lounges, and tables, and here the patients pass the evening, in conversation and reading the daily papers (morning and evening), weekly illustrated papers, magazines, &c.

The out-door life centres in the verandah and "revolving



VIEW OF VERANDAH AND BALCONY AT OVERTON HALL.



PORTABLE GARDEN HUT OR SUN-TRAP.

shelters," where open-air repose occupies a large share of the routine of the day.

Engaged in light occupation, feeding, or amusement; surrounded by fresh air; screened from wind; liberally supplied with warm clothing and rugs: invalids pass their days on couches, deck-chairs, or beds, and whilst learning how to get well, and keep well, time is not found to hang heavily on the hands, even of those whose powers are most restricted.

The occupants of verandah and shelters soon realise that the open air is their true home, and that the house is merely for use at night and as a receptacle for their possessions.

The furniture of the verandah includes couches, deck-chairs, and light spring bedsteads, tables and chairs for visitors.

Of indoor life the patient is encouraged to have as little as possible, but indoors our arrangements all tend for light, air and cleanliness. The walls and ceilings, devoid of cornices and plaster-work, are covered with silicate paint, which allows of absolute cleansing with disinfectant solutions. The floors are painted a dark mahogany colour, on which the least dirt shows up; these and the paint-work of doors and windows are heavily varnished to allow of frequent cleansing. All round the room a 3-in. strip of board is nailed to the floor, which effectually prevents furniture from being pushed close to the walls, and thus space is provided for cleaning behind heavy furniture and for a free current of air. There are no fixed carpets, but rugs, each small enough to be rolled up and removed by a servant.

The furniture is mostly mahogany; each piece stands high from the floor, being raised if necessary on pyramidal blocks of wood, to admit of the floor being easily seen and cleansed.

The daily cleansing of floors and the cork-carpet (100 yards of noiseless surface throughout the house) is done with an instrument like a croupier's rake, which is used to push about a damp cloth, previously wrung out of a bucket of disinfectant. The gloss of the varnish is renewed by a second rub round with a flannel damped in paraffin. Good paraffin leaves no smell behind. Damp cloths take the place of all dusters.

The disposal of the sputum receives very special attention, and presents no difficulty when once the patients have grasped the reasons for the ordering of their life, and the importance of guarding themselves and others against microbic dangers.

The "spit-flask" used is of pink glass, of four ounces capacity; a glass disc covers its mouth, and across the disc is pasted a strip of tissue paper. Before using the flask this paper must be broken, and the torn paper thus indicates that the flask has been used.

At intervals during the day a large number of freshly



CORRIDOR HALL.



SHELTERED VERANDAH AND BALCONY.

cleansed flasks, containing a little disinfectant solution, are distributed among the patients.

The methods of treatment pursued are those which the best continental sanatoria (such as Falkenstein, Nordrach, Göobersdorf, &c.) have pointed out as the most successful.

The objects of the treatment are to combat the wasting and fever (which are the main features of tuberculous disease), to relieve the cough, to acclimatise the patient to the fresh air demanded by his malady, and to increase the patient's weight, and thus supply Nature with that surplus material with which to repair damages.

The chief weapons used for this purpose are : (1) good and varied food, in generous quantity ; (2) fresh air throughout the whole twenty-four hours, with protection from cold ; (3) rest in the recumbent posture till all active mischief is over ; (4) graduated exercise, as the patient's improvement will allow of it ; (5) drugs are only used to relieve symptoms, the kitchen being relied on as the best pharmacy.

For a phthisical patient to carry out a duly regulated open-air life requires an amount of self-denial on his part, as well as a never-ceasing attention on the part of his physician, which can alone be secured by constant encouragement, skilled attendance, and an environment specially arranged for this purpose.

A phthisical patient arriving at a health resort has not only to encounter the difficulties of finding a suitable lodging, but he may have to meet, nowadays, the scare which has arisen concerning the communicability of his disease.

At the moment when the most valuable therapy for his condition is comfortable surroundings and freedom from trouble, he may find himself involved in a thousand-and-one dilemmas.

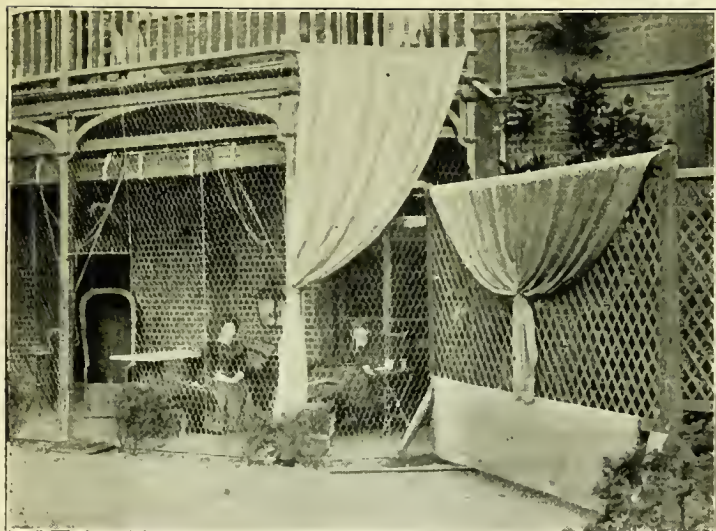
The open-air treatment can be carried out as successfully in England as elsewhere.

The essentials of a dry subsoil and shelter from wind exist so pre-eminently in Bournemouth, which possesses a winter climate far less rigorous than other south-coast places, and a summer climate rendered delightful by the prevailing Channel breezes and a remarkably small rain-fall, that it would be difficult to select a spot more suited to the open-air treatment.

In lodgings and hotels this treatment is almost impossible.

In a house dedicated to this special purpose, where the possibility of cure is common knowledge, the invalid meets the encouragement of example, and is stimulated by the presence of promising cases.

The routine day is punctuated by meals of which the following is a sketch :



WIND-SCREENS AND TRANSLUCENT CURTAINS.



FURNITURE WITH SPACE BEHIND AND BENEATH.

8 a.m. A glass of milk, hot or cold.

9 a.m. Breakfast: porridge, tea or coffee or cocoa, fish, eggs, bacon, kidneys, chops, sausages, grilled chicken, cold ham or tongue, jam and marmalade.

11 a.m. A glass of milk.

1 p.m. Luncheon: cold beef, mutton, lamb, chicken, hot pigeon or chicken pie, cutlets, steak pudding, sweets, jellies, fruit tarts, jam tarts, custard, tapioca, suet, jam, apple dumplings; cheese, salad, fruit.

4 p.m. Afternoon tea with plenty of milk, buttered cakes, scones, buns, toast, bread and butter.

7 p.m. Dinner: soup, thick or clear, or fish, joint, poultry, game, vegetables, sweets, cheese, fruit and coffee.

9.30. Glass of milk, hot or cold, in bed-rooms.

Wines: good red wine and whisky are the stimulants generally advised.

Patients are required to bring an excess of warm loose clothing, complete woollen underwear, rugs, caps, felt-boots, &c. Evening dress is never used. It is most *undesirable* to bring old fluffy shawls, comforters, dressing-gowns, or cushions.

It is our endeavour to carry on the house as a private house, and in *no* sense as an "Institution" or "Home."

The weekly charge payable to the matron for maintenance is 5 guineas, which is absolutely inclusive of all domestic charges except personal washing and wines. The medical fee is 2 guineas per week.

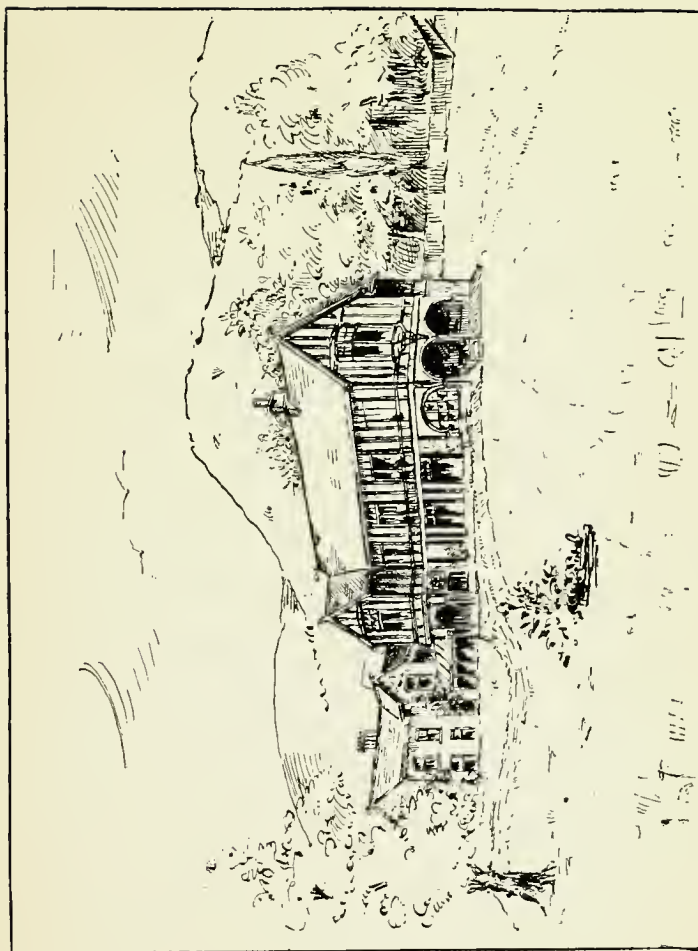
An attempt to carry out this open-air treatment in patients' houses, or apartments of doubtful suitability, is as disappointing as it is costly. The Sanatorium owes its existence to the recognition of this fact.

ROSTREVOR SANATORIUM, IRELAND.

(DR. HOWARD SINCLAIR.)

This Sanatorium is situated on the slopes of the Mourne Mountains, about 350 feet above the level of the sea, and protected by the hills from north and east winds, and has accommodation for eighteen patients; one and a-half miles below is Carlingford Bay, and two and a-half miles distant is the well-known health resort of Rostrevor, sometimes called the Riviera of Great Britain.

The soil is gravel; the variations of temperature are rarely



ROSTREVOR SANATORIUM.

great or sudden; the place is noted for the mildness of its climate, snow rarely lying for more than a day in winter, and in summer its elevation tempers the heat. The rainfall is one of the lowest in Ireland. Chest patients who have been before unable to winter in Ireland have been able to do so in Rostrevor with the best results.

The principal aim of the Sanatorium is to treat all forms of phthisis (especially those in an early stage) by a course of treatment based on the methods of the best-known Continental sanatoria.

Patients are not encouraged to stay indoors, but to live outside, or in the verandah and shelters in inclement weather. The verandah has arrangements for heating under foot, should it be considered necessary, in severe weather.

In addition to general walks there is a garden and a pleasure ground, with a high hedge, making a sheltered spot for where in fine weather the dining-room tables can be brought out for meals.

Several of the rooms are fitted with French windows, so that those arriving with a high temperature can be kept in bed and wheeled out into the open air until the febrile symptoms subside.

There are four sleeping huts in sheltered positions through the grounds, as well as two revolving shelters.

Great attention is given to diet, and the patients are under the constant supervision of the physician, who adopts the Continental plan of taking meals in the dining-room with the patients, thus enabling him to superintend and see that all are taking a sufficient amount of nourishment.

There is a nurse-attendant for massage, baths, &c. Douche, spray, and medicated baths are available; and breathing



exercises, mild calisthenics, and graduated walks, are carefully prescribed to suit the special needs of each patient.

Patients are provided with washing pockets for their handkerchiefs.

The institution is fitted with electric light, and treatment by electricity can be resorted to if necessary.

The drainage and water (from a deep well bored through the granite) are both excellent. All milk used comes from a specially chosen source, and only from a *tuberculin tested herd*. Large quantities of milk are given to those who are not fit for the ordinary diet, and the forms are varied to prevent the patients tiring of it; such as koumiss, kefir, rennet, &c.

Regular rubbing, dry or with alcohol, is used to harden the system against cold or changes of temperature.

The patients are carefully *instructed* how to avoid new dangers, and shown the importance of a proper diet and life in the open air in maintaining their improved health.

Experience has shown how much easier it is to submit to a course of treatment in a regular institution, where "to get well" is the chief object.

Terms three and a-half guineas a week. Personal laundry, wines, or special drugs, extra. Board, medical attendance, massage, baths, &c., are included in the terms. Special diets ordered by the physician are not charged extra.

The regular board consists of:—milk at 7.30 a.m.; breakfast, 9 a.m.; milk and bread and butter, 11 a.m.; early dinner, 1.30 p.m.; milk and biscuits, 4 p.m.; late tea, 6.30 p.m.; light supper, 9 p.m. (Milk taken averages two quarts daily and half-a-pint of cream.) Bills weekly.

Patients are not allowed to have meals in their own rooms unless specially ordered by the physician.

The bedrooms are well heated in cold weather, thus enabling the windows to be kept open.

Patients should provide themselves with light warm rugs and wraps (not furs) for the open-air treatment, and their own clinical thermometer, with which their temperature will be taken at least three times a day. Woollen underclothing will be required.

Irish patients come by the Great Northern Railway to Warrenpoint, from thence it is a drive of three miles up hill to the Sanatorium. A car can be had for 2s. 6d.; a cab for 3s. 6d.

Patients from England or Scotland can come most easily by any of the cross-channel steamers to Belfast or Greenore.

For further particulars, apply to the resident physician, Dr. Howard Sinclair, Rostrevor Sanatorium, *viâ* Warrenpoint, Co. Down.

COTTAGE SANATORIUM, RUDGWICK, SUSSEX.

(DR. ANNIE MCCALL.)

This Cottage Home has lately been opened in a suitable situation on the borders of Surrey and Sussex, for the cure of patients in the early stage of consumption, and for the preventive treatment of those threatened with the same disease.

The climate is mild, yet bracing, the house being absolutely sheltered from north and east winds by the long range of the Surrey hills, while the average sunshine is greater than in most inland places.

Rudgwick is situated about 37 miles from London, and 17 miles from the sea, and stands 400 feet above the sea level. It thus combines both country and sea air, and, the climate being mild in winter, it is possible for patients to live to a large extent in the open air.

The house, "Kings," is small, but stands in its own grounds of about four acres. It is provided with a glass house facing south, which is used by patients in bad weather, and has, in addition, other more open shelters.

The chief factors in the treatment are:—(1) Living in the Open Air. (2) Abundance of Good Food. (3) Regulation of Rest and Exercise. (4) Hydropathy.

Under the first heading are included:—Living almost entirely out of doors by day. Lying out on couches under the shelters, or on the lawns, according to weather. Regular slow walks in the surrounding beautiful country. Steady regulated hill-climbing with lung exercises (to expand the lungs). Bicycling and driving (there are excellent bicycling roads in every direction).

In the house the greatest stress is laid upon free ventilation, apart from draughts—windows being kept open day and night in a direction away from the wind.

Very liberal diet of wholesome food is the second factor in the cure, food being given at frequent intervals, and consisting largely of milk, eggs, cream, meat, fresh vegetables, and fruit.

The house is well built, and has good cellarage beneath. There are three rooms with two beds in each, and two single-bedded rooms, making accommodation for 7 or 8 patients.

The terms for each patient are from £2 2s. weekly. Bed-room fires are extra. All fees are payable weekly in advance.

Medical care is included in the charge made unless special visits are required. Dr. Annie McCall attends once a week and visits each patient. The Matron is a fully-trained nurse,

late sister to one of the large hospitals, and is assisted by a nurse.

Rudgwick is on the Horsham and Guildford line of the L.B.S.C.R., and the house is five minutes' walk from the station.

STOURFIELD PARK SANATORIUM, POKESDOWN, BOURNEMOUTH.

(DR. W. DENTON JOHNS.)

The open-air treatment of phthisis has been carried on by Dr. Denton Johns in Bournemouth during the last three years with marked success. The above Sanatorium, into which he has lately moved, is specially adapted to carry on the treatment with even more satisfactory results.

Added to the well-known advantages of air, soil, and scenery, which have long made Bournemouth the home of the consumptive, Stourfield possesses a first-rate position. It stands on an eminence commanding magnificent views of the surrounding country and sloping away to the south-east towards the valley of the Stour. It is close to the sea, but sheltered by thick belts of pine woods. The grounds, ten acres in extent, are well laid out in park-like fashion, with many large trees, pines and cedars, so arranged that in summer there is abundance of shade and in winter plenty of sunshine. The sub-soil of this property is a deep bed of sandy flint gravel, very dry and pure. The water supply of the Sanatorium is from the Bournemouth Water Company. The house is bright and sunny, facing south-west and north-east. Perfect ventilation is assured by casement windows occupying more than half the outer wall of the rooms; corridors open at each end, and electric fan ventilators extracting air above. Every convenience is supplied in the way of electric light, electric lift, shower and douche baths, and heating by hot water.

The distinguishing feature of Dr. Johns' Sanatorium is the kiosks, which open on all sides according to the direction of the wind. Here the meals are served to the patients, and here they spend the whole of the day, except such portion as is given to the regulated exercise prescribed. Some patients even prefer to sleep in them at night instead of indoors. It may be interesting to mention that last winter two gentlemen slept out in their kiosks all winter, though the temperature would sometimes fall as low as 29° F. When fully completed, Dr. Johns hopes to have forty of these kiosks or



STOURFIELD PARK, BOURNEMOUTH (*front view*).



STOURFIELD PARK SANATORIUM—SHELTER IN THE GROUNDS.

huts in his new Sanatorium, and at night they will be lighted by electricity. The feeding is under the personal supervision of the doctor, who is present at all meal times. It consists of what is now generally understood by the term forced feeding, and is on the same system as that now practised by Dr. Walther, at Nordrach. The Sanatorium possesses its own laundry and disinfecting chamber. It is readily accessible, being five minutes' drive from Pokesdown Station and twenty minutes from Bournemouth Central. The terms, inclusive of medical attendance and everything required by the patient, are from four to six guineas weekly. The only extras are personal items—as washing, wine, spirits, and medicine. Forty-five patients can be received, and applications should be addressed to the Secretary, who will gladly supply any details desired.

VICTORIA HOSPITAL FOR CONSUMPTION, CRAIGLEITH, EDINBURGH.

(DR. R. W. PHILIP.)

The Victoria Hospital was the first, and is apparently still the only hospital in the United Kingdom for the gratuitous treatment of consumptives strictly on the open-air principle. The outdoor department, which is situated in the heart of Edinburgh, affords a central office where patients are received and treated from day to day, and where suitable patients are selected for hospital residence. The educative value of the outdoor department has been immense. There has been recorded a relative increase in the number of early cases which present themselves, and a corresponding diminution in the frequency of hopeless ones. By daily or frequent visits to the institution patients are induced to lay aside their fear of going about and are taught by constant reiteration the principles of the open-air system. Although the *clientèle* of this department is both very numerous and poor, it used to seem marvellous in the earlier days that untoward incidents were so infrequent of occurrence in relation to these visits to the institution in all weathers. The experience of the outdoor department has throughout afforded corroborative evidence as to the value of open-air treatment. At the same time the patients are instructed in respect of preventive measures. For many years the following rules have been distributed at the Out-Patient Department:—

RULES FOR CONSUMPTIVE PATIENTS AND THOSE LOOKING AFTER THEM.

Consumption is a communicable disease. It may pass from person to person. It may pass from one lung to the other, or from one organ to another.

The chief source of infection is the expectoration of the consumptive. The great danger lies in the drying of the expectoration, and the blowing about of the dried infectious material.

The spread of consumption can be largely prevented. *If the succeeding directions be obeyed, there need be no serious danger in ordinary intercourse with patients. The breath of the consumptive is not directly infectious.*

The patient should expectorate into a jar or cup containing a tablespoonful of carbolic acid (1 to 20) or other disinfectant.

The vessel should be changed once in twelve hours, or oftener. It should be cleansed by being filled up with *boiling* water. The combined contents should be poured down the w.c. The vessel should then be washed with *boiling* water.

When the patient is out of doors he should carry a pocket spitting flask (such as Dettweiler's, or the Victoria Hospital simpler model). The flask should be used and cleansed like the jar. The patient should never spit on the streets.

The patient should not use handkerchiefs for expectoration. If this ever has to be done the handkerchief should be of an inexpensive material, that it may be burned after use. Squares of rag or paper, which may be used for convenience, should be similarly treated.

The expectoration should on no account be swallowed, for thereby the disease may pass to other organs.

Consumptive patients should avoid kissing.

Consumptive mothers should not suckle.

If expectoration has been accidentally deposited on the floor or other object, it should be wiped up and burned, and the surface of the object cleansed with strong antiseptic.

Rooms which have been long occupied by a consumptive patient should, before occupation by someone else, be carefully disinfected, as after other infectious disease.

FRESH AIR is the food of the lungs. Therefore, see that the lungs be not starved.

A.—By Day.—The patient should occupy as airy a room as possible. It must be scrupulously dry, and preferably removed from the ground. The window should be freely open. When able, the patient should be out of doors once or several times during the day. He must avoid over-effort, and damp, or chill, which would counteract the benefit.

B.—By Night.—He should sleep alone. The bedroom should be large and airy. The window should be kept open, less or more according to the season.

THE HOSPITAL PROPER.

The hospital proper is situated about a mile to the north-west of Edinburgh. It is placed advantageously on a gentle slope facing due south, and basks in sunshine to a remarkable extent. The present hospital was not built originally for the purpose, but is an old mansion-house which has been adapted sufficiently well. The ground, which extends to 17 acres, includes a beautiful park and gently inclined lawns and winding paths. The grounds are sheltered, without being overshadowed, on various sides by a splendid belt of trees. The position of the grounds and trees renders it possible to gain protection somewhere from every possible wind, while a couple of lawns at different levels catch all available sunshine. The present accommodation of the hospital is limited to fifteen patients, seven male and eight female, but a considerable extension is shortly expected. The climate is the climate of Edinburgh, temperate, but changeable, with a fair amount of mist and wind. There is, however, at all seasons a sufficient proportion of sunshine. The rooms of the patients are bright, with cubic capacity of approximately 1,000 cubic feet per patient (some have almost twice this amount). Heating is arranged for by open fireplaces, which serve also to assist much in the ventilation. Some of the rooms contain three patients, others two, and others, again, only one. Each room has at least one large window, which is constantly open, day and night, and the larger rooms have three windows, which afford free ventilation by a constant current of fresh air. The temperature is regulated according to thermometric reading. A thermometer is placed in each room and every passage. It is the duty of the nurse, or some one deputed by her, to watch the thermometers from hour to hour throughout the house. A uniform temperature has been found practically easy of attainment by increasing or diminishing the size of the fires. The windows have never been shut, day or night, since the hospital was opened. The air of the rooms is thus remarkably fresh, so that visitors constantly remark on the absence of stuffiness and used-upness such as even well-regulated dwelling-houses exhibit in some degree. The furniture of the room is of the simplest. The floors are plain and polished, and the walls are coloured with distemper which is renewed from time to time. The bedsteads have an open spring mattress, covered by a very light hair mattress, and the bed

clothing is made as little as it can be, compatibly with comfort. There is a simple bedside table, made of glass and metal, which comes readily to pieces for cleansing purposes, an adaptation of the small recently introduced instrument tables. The lower shelf of this is screened by means of a thin cotton strip, which is frequently renewed. The expectoration is carefully treated along the lines which have just been indicated. No patient is allowed to expectorate within doors or outdoors save into the receptacle provided for the purpose.

THE METHODS OF TREATMENT IN PRACTICE.

(1) *Free Access of Fresh Air and Sunlight into the Rooms.*—As already indicated, the rooms are bright, with one to three large windows, facing especially south. One or two of these windows in each room have never been closed since the hospital was opened. Most of the windows are provided with a closely-fitting board, 8 inches deep, which is placed within the lower part of the framework, and on which the lower edge of the lower sash rests. This allows, even in the stormiest weather, a free but gentle current of air to pass upwards between the sashes into the room. Under ordinary conditions of weather, however, the windows and doors are freely opened in addition. The windows are not allowed to be closed merely to raise the temperature within the room. This must be effected by an increase of fuel throughout the house. In practice it has been found easy in this way to obtain a uniform temperature of 60° F. The patients are thus taught, and very soon learn to fear a draught less than a stuffy atmosphere.

(2) *Out-of-door Life.*—Under ordinary conditions every patient is out of doors for a considerable portion of the day, the length of time being prescribed in individual cases just as are the diet and medicines. The more delicate patients, especially those with marked pyrexia and circulatory disturbance, are conveyed outside to reclining chairs, or the bed is carried out without disturbing the patient. Care is taken that such patients are kept sufficiently warm by suitable clothing. I have treated thus patients with considerable pleural effusion with much advantage. For other cases, walking exercise on the gently sloping paths is enjoined, with rest from time to time. During the finer weather meals are commonly taken outside.¹

(3) *Graduated Exercise.*—Some of the patients rest entirely

¹ Many shelters of different types of construction are suitably disposed through the grounds.

at first. The great determinant under this head is the state of the circulation. For others quiet walking exercise during regulated intervals is sufficient. This is often combined with the use of a simple retaining apparatus, whereby the shoulders are thrown backward, the elbows approximated behind, and the play of the chest, especially in its upper portion, rendered free. Other patients are allowed light dumb-bell or Indian club exercises, with the same object in view. To still stronger patients mild golfing or quoit-throwing is permitted, and to those further on, gentle cycling exercise. In addition, simple garden games of various kinds are permitted in sheltered corners, according to the direction of the wind. In the regulation of these measures the pulse is regarded as a better indicator than the stethoscope.

(4) *Clothing*.—Sufficiently warm but light clothing is prescribed. To meet this indication there is nothing better than the well-known Shetland materials. The patients are taught that, as cold has not produced their disease, so the piling on of clothes will not cure them, and is, contrariwise, distinctly harmful in most cases. Thus chest-protectors, which simply harbour dirt and foul odours, are forbidden, and the extraordinary and varied wardrobe in which the patient generally arrives is speedily simplified. The patient is taught that, just as the fresh air must be freely admitted to his lungs, so the surface of his body may be exposed to its benign influence without harm.

(5) *Bathing*.—Even the most delicate patient is sponged gently but widely, once, or preferably twice, daily. In all cases, where there is not a distinct contra-indication, the patient, after some ten days' observation, is prescribed a regular bath. This is simply a momentary dip, the temperature of the water being regulated according to the season, but always to the cool side. This has proved in my experience a great advantage, and has never been followed by the slightest accident. The bath is succeeded by rapid dry-rubbing—in more delicate cases by a nurse or attendant, and in stronger cases by the patient himself. In some instances more formal massage is practised with advantage by the nurse, and frequently oily applications—chiefly stimulating, with perhaps cod-liver oil as the basis—are applied. It is marvellous how soon unhealthily acting skins come to function properly.

(6) *Dietary*.—In most cases five meals are allowed daily. Of these, three are the more formal breakfast, dinner, and tea, while between breakfast and dinner, a cup of soup or warm milk or the like, and towards bedtime something similar is given. Milk is allowed freely throughout, and forms a large

proportion of the dietary in pyrexia cases. In many of these, raw meat juice in various forms is regularly supplied. Stimulants are not exhibited universally, but in pyrexia conditions, and in cases where there is much prejudice of the circulation, are usually prescribed. Before and after the larger meals the patients are enjoined to rest for a little, and the more delicate recline on a couch or in bed.

(7) *Medicinal Treatment*.—It is unnecessary to discuss this at present. It is sufficient to say that fattening agents are freely used. Cod-liver oil, which somehow or other seems to have fallen more into the background than it deserves in recent times, is freely given. It has been found that, if the larger hygienic measures which have just been detailed are pursued, the inconveniences frequently reported by patients do not appear. In addition to this, the prolonged use of arsenic has often proved most helpful. Such measures, combined with one or other of the more specific lines of treatment, are usually important adjuvants, but I am satisfied that in the absence of the other methods they are of comparatively little use in most cases. In some instances throughout, and in many for a period at least, they may be advantageously dropped.

RESULTS OF THE OPEN-AIR TREATMENT.

(a) In the first place, it is right to emphasise that during prolonged experience of this treatment I have not witnessed one untoward incident resulting therefrom. During the years which have elapsed since the hospital was opened there has not been a single day on which some of the patients have not been outside, and on most days almost all have been able to be out for a time. Rain and snow have not been allowed to form a contra-indication. In such weather the patients are suitably shod and mantled, the shoes and mackintoshes being put on and thrown off in an outer hall.

(b) A remarkable change of type of disease occurs speedily. Within three or four days the patient's colour begins to manifest a healthier aspect. His appetite rapidly picks up, so that patients whose chief complaint was anorexia may within ten days or so eat voraciously. Night sweats disappear almost at once. Again and again I have admitted patients either from their own homes or from other hospitals who required to have their clothing changed several times throughout the night, and within a week's time those patients have ceased to manifest this distressing symptom, their night rest being simultaneously benefited. So uncommon is this symptom that, while I was anxious to accede to the request of one of my colleagues that he might have an opportunity

of conducting some observations thereon, he had to go elsewhere in order to obtain sufficient material. Similarly, the temperature in most cases, which may have been both irregular and high previous to admission, tends gradually to assume the normal, or rather the slightly subnormal, which is the rule in many cases of latent tuberculosis. In like manner the cough quickly lessens, and finally disappears. It has been frequently remarked to me by visitors going round the wards how seldom the patients coughed. The body weight, too, and general condition show corresponding improvement. An increase of 14 to 16 pounds has not been an uncommon incident during the comparatively short stay which a hospital with limited accommodation for poor patients permits.

(c) The educative value of such residence cannot be overestimated. The patients learn unconsciously how to treat themselves. They realise how practically true it is that open air, day and night, and sunlight, are their best friends, and that attention to hygienic measures can be their salvation. They thus become on their discharge from the hospital apostles of the new faith, and one frequently hears of the results of their teaching in their own homes.

(d) In so chronic and treacherous a disease it is not wise to speak confidently of cures effected. The proportion of patients, however, who have left the hospital and maintained for years continuously good health, and been able to resume regular work, perhaps with a change of employment, is a large one. The list includes cases where both lungs and larynx were involved on admission. On the other hand, disappointments are frequent. Some of the most promising cases have returned on our hands or have gradually fallen back elsewhere. The proportion of these cases is larger than it should be from causes over which we have meantime no control. In the first place, our patients are chiefly in poor circumstances, and are compelled too rapidly to resume the conditions of life which induced the disease. And secondly, the resources of the institution are so limited, and the demands so enormous, that the patient's stay in hospital has often to be curtailed when it ought to be prolonged.

(e) The course of treatment is a pleasant one. There are none of the drawbacks which have sometimes been portrayed in relation to hospitals for consumptive patients. Far from being a gloomy place, our hospital is one of the brightest of households. The only dull day in most cases is the day when the patient's discharge is signed.

LENGTH OF RESIDENCE.

Under present regulations the patient's stay is practically limited to some two months. This in some cases is sufficient either to start the cure or effect such amelioration that, if the patient can continue generally the same line of treatment, he does well. But in the larger group of patients it is not sufficient. The results of my experience suggest that a residence of from four to six months is desirable. Because this is meantime impossible, however, we have framed a regulation which permits likely patients to avail themselves of the benefits of the hospital *régime* by spending the day in the hospital grounds and dining with those in residence.

"WHITMEAD HILL," TILFORD, NEAR FARNHAM.

(DR. J. HURD-WOOD.)

This Sanatorium is situated among the fragrant pines and heather, on the southern slope of one of the spurs of Crooksbury Hill, which entirely shelters it from the north, and it is well sheltered from the east by a well-wooded slope, lying open to the south and south-west. It faces due south, and is surrounded by its own gardens and fir woods of 18 acres, among which are numerous walks with every gradation from level to fairly steep, affording the graduated exercise so essential to the after treatment, with seats at frequent intervals, some sheltered from the sun, others more open, as well as Kiosks and Liegenhallen in different parts of the grounds. It is fitted with electric light in every room, and the water is of excellent quality from a deep well some distance from the house; the sanitary arrangements were overhauled a short time ago, and are perfect. Everything has been done, and will be done, to make the establishment a perfect one, and although the treatment will be on strictly "Nordrach" lines, every effort will be made to make the patients as comfortable and happy as possible.

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The Open-air Treatment is under the supervision of W. P. Mears, M.A. (*hon. causa*), M.D., and of Mrs. W. P. Mears, L.R.C.P.I., who devote their whole time to the personal care of the patients. Dr. R. W. Philip, F.R.C.P., is the consulting physician. The treatment is on the *strictest* lines.

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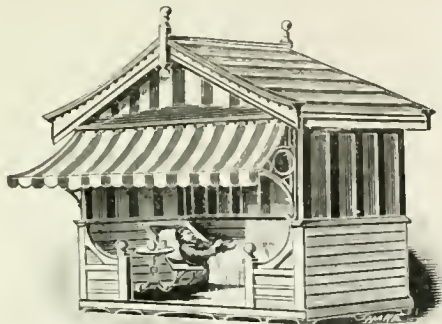
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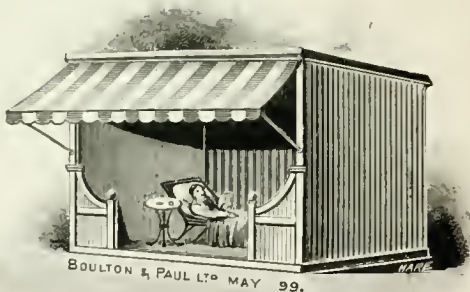
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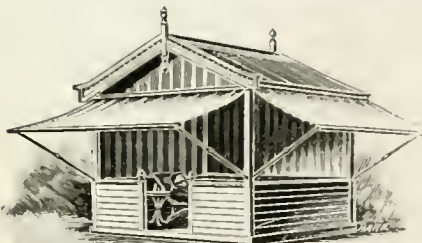
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MANUFACTURERS—

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PLOUGH COURT, LOMBARD STREET, LONDON.

